

**REMARKS**

**Status of the Application**

Claims 1-3, 5-10, and 12-34 are pending in the application. Claims 15, 17, 19, and 32-34 are rejected under 37 C.F.R. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 2, 5-7, 29, and 32-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Shiraishi (US Patent 5,054,530), Japan 216 (JP 2000-203216), Emerson (WO 97/46359) and Japan 310 (JP 05-229310). Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Europe 480 (EP 646480). Claims 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Japan 805 (JP 62-286805). Claims 13-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Japan 408 (JP 03-186408) and Takigawa et al. (US Patent 4,214,618). Claims 12 and 16-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Japan 107 (JP 62-059107). Claims 20-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson, Japan 310 and Japan 107 as applied above and further in view of Japan 408 and Takigawa et al. Claims 27 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Secondari (US 5,735,979).

By this Amendment, Applicants hereby amend claims 13, 15-19, 32 and 33. Applicants submit that these claim amendments are merely clarifying to place the claims in better condition for appeal. Further, the amendments should not change the scope of the claims. Thus, no additional consideration and search should be necessary in light of the amendment. Therefore, Applicants respectfully submit that the claim amendment should be entered and considered.

**Claim Rejections - 35 U.S.C. § 112**

*Claims 15, 17, 19, and 32-34 are rejected under 37 C.F.R. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.*

Applicants hereby amend claims 13, 15, 17, 19, 32 and 33 in order to correct the deficiencies identified by the Examiner. Applicants note that the amendments clarify the distinction between the fine grooves and the fine-width circumferential grooves.

**Claim Rejections - 35 U.S.C. § 103**

*Claims 1, 2, 5-7, 29, and 32-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 (JP 03-220004) in view of Shiraishi (US Patent 5,054,530), Japan 216 (JP 2000-203216), Emerson (WO 97/46359) and Japan 310 (JP 05-229310).*

The Examiner has provided the same basic rejection of the subject matter of claim 1 as was provided in the previous Office Action, dated August 20, 2008. Therefore, the following comments are mainly directed toward the Examiner's Response to Arguments found on page 9 of the instant Office Action.

In response to the submission that good wet drainage conflicts with good steering stability and that one of ordinary skill in the art would recognize the conflict in the structures

associated with each, the Examiner argues that the submission was not persuasive. The Examiner argues that no actual evidence was proffered, only Attorney argument, which was not sufficient to convince the Examiner that the references teach away from one another.

Further, with regard to the argument that the prior art references teach away from a combination with one another, the Examiner states that the argument is not persuasive. The Examiner argues that the sipes disclosed in Japan 310 would provide ample suggestion to be combined with Emerson and the asymmetrical tread pattern of Japan 004 because the sipes in Japan 310 provide improved traction. Thus, the Examiner basically argues that the prior art does not teach away from one another, but only that the combination may not be preferable or desirable.

Applicants respectfully submit that JP '004, the primary reference, and Emerson (WO 97/46359) and JP '310 (JP 05-229310), the secondary references, each fail to disclose or even suggests the feature that "the rib-like land part ... is provided with plural fine grooves extending in a direction crossing with the equatorial plane of the tire, and **the fine groove has a portion extending in a direction inclined with respect to a radial direction of the tread in the tire**" as recited in claim 1.

The Examiner cites the secondary references, Emerson and JP 310, to show "a fine groove or sipe formed in a rib" in general. However, the sipes of Emerson and JP 310 actually do not have the unique three-dimensional feature as the fine grooves of the present invention as recited. Claim 1 states that the fine grooves have a portion extending in a direction inclined with respect to the radial direction of the tread in the tire. See the exemplary embodiment of claim 1 shown in FIG. 6 of the instant application, in which the unique three-dimensional feature is clearly shown. Assuming that the radial direction of the tread in the tire is directed toward a tire

center, JP '310 only shows sipes 7 having an incline with respect to a widthwise direction, but not a radial direction. Therefore, Applicants submit that the sipes recited in claim 1 are not disclosed in any of the prior art references cited by the Examiner.

Further, Applicants note that one of the main objects of the present invention is "simultaneously establishing the improvement of the resistance to hydroplaning and the control of the tire noise, which has hitherto been a conflicting relation, in a high dimension" (see paragraph [0007] of US 2005/0247388 A1). In order to achieve this object, columnar resonance generated by grooves in a tread is decreased by arranging "a greater number of the grooves at the axially inner side from the tread center than the axially outer side from the tread center" as recited in claim 1 (see also, paragraphs [0057]-[0058]), so that the ratio of noise generated at the axially outer side from the tread center, which noise is relatively large, is reduced as compared with the ratio of noise generated at the axially inner side.

Moreover, resistance to hydroplaning at the axially outer side in the mounting on the vehicle (the grooves therein are relatively narrow) is improved by making the total volume of the lateral grooves in the land part relatively larger than the volume of lateral grooves formed in the land part as recited by the feature "a total volume of lateral grooves formed in a land part at the axially inner side in the mounting on the vehicle among the land parts defined between the circumferential groove and the tread end, per a unit width in the widthwise direction of the tread over a full circumference of the tread, is made smaller than a similar total volume of lateral grooves formed in a land part at the axially outer side in the mounting on the vehicle", as recited in claim 1.

Accordingly, there is obtained **a first superior effect that suppression of tire noise and resistance to hydroplaning can be both established in a compatible manner** in the invention as recited in present claim 1.

Additionally, control of tire noise and resistance to hydroplaning are difficult to establish simultaneously, especially where "a camber to ground is applied to the tire mounted on the vehicle" (paragraph [0008] of US 2005/0247388 A1). The following features of claim 1, "the rib-like land part has a center in the widthwise direction of the tire positioned from the equatorial plane of the tire toward a side of elongating a circumferential length of a ground contact area of the tread when a negative camber is applied to the tire" and "a circumferential groove located at the side of elongating the circumferential length of the ground contact area of the tread among the two circumferential grooves sandwiching the rib-like land part has a wide width", provide the following benefit: "[t]he contribution of the circumferential groove to the resistance to hydroplaning or drainage property becomes maximum at a portion of the tread having a maximum ground contact length in the circumferential direction" (lines 1-5 of paragraph [0013] of US 2005/0247388 A1). Thus, a second superior effect, that good resistance to hydroplaning is achieved even in a case where "a camber to ground is applied to the tire mounted on the vehicle," is obtained by the combination recited in claim 1.

Furthermore, by providing "the fine grooves" having "a portion extending in a direction inclined with respect to a radial direction of the tread in the tire" as recited in claim 1, and as shown in the exemplary embodiment of FIG. 6 the instant application, there is obtained a third superior effect, that "the formation of the fine grooves 6 extended in such a direction escapes the strain in the circumferential direction, while it is avoided to continue the groove in the widthwise

direction of the tire, and as a result, **the deformation of the fine groove can be suppressed to ensure the rigidity** by the interference through adjoining walls defined and regulated in the widthwise direction of the tire." See paragraph [0085] of US 2005/0247388 A1, which is the published application for the instant application.

Finally, as a result of combination of the first to third superior effects described above, there is obtained a fourth *synergetic* superior effect that "the conflicting performances among the resistance to hydroplaning, steering stability and wear resistance, which have hardly been established, can be established in a high dimension" (paragraph [0086] of US 2005/0247388 A1).

In contrast, none of JP '004, Emerson and JP '310 or other cited references discloses or suggests the unique feature of the present invention as recited in present claim 1 that the plural fine grooves provided in the rib-like land part "has a portion extending in a direction inclined with respect to a radial direction of the tread in the tire", as described above, and thus these cited references naturally fail to cause the superior effects resulting from the combination of elements recited in claim 1.

In view of the facts above, Applicants submit the Examiner's proposed combination of references cannot render claim 1 obvious. Claims 2, 5-7, 29, and 32-34 depend from claim 1, and are patentable at least by virtue of their dependency therefrom.

*Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Europe 480 (EP 646480).*

Claim 3 depends from claim 1. Because the Examiner's proposed combination fails to render claim 1 obvious, and because the references used to reject claim 3 fail to cure the

deficiencies noted with respect to claim 1, claim 3 is patentable at least by virtue of its dependency from claim 1.

*Claims 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Japan 805 (JP 62-286805).*

Claims 8-10 depend from claim 1. Because the Examiner's proposed combination fails to render claim 1 obvious, and because the references used to reject claims 8-10 fail to cure the deficiencies noted with respect to claim 1, claims 8-10 are patentable at least by virtue of their dependency from claim 1

*Claims 13-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Japan 408 (JP 03-186408) and Takigawa et al. (US Patent 4,214,618).*

Claim 13-15 depend from claim 1. Because the Examiner's proposed combination fails to render claim 1 obvious, and because JP '408 and Takigawa fail to cure the deficiencies noted with respect to claim 1, claims 13-15 are patentable at least by virtue of their dependency from claim 1.

*Claims 12 and 16-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Japan 107 (JP 62-059107).*

Claim 12 and 16-19 depend from claim 1. Because the Examiner's proposed combination fails to render claim 1 obvious, and because JP '107 fails to cure the deficiencies noted with respect to claim 1, claims 12 and 16-19 are patentable at least by virtue of their dependency from claim 1.

*Claims 20-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson, Japan 310 and Japan 107 as applied above and further in view of Japan 408 and Takigawa et al.*

Claim 20-26 depend from claim 1. Because the Examiner's proposed combination fails to render claim 1 obvious, and because JP '107, JP '408 and Takigawa fail to cure the deficiencies noted with respect to claim 1, claims 20-26 are patentable at least by virtue of their dependency from claim 1.

*Claims 27 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 004 in view of Shiraishi, Japan 216, Emerson and Japan 310 as applied above and further in view of Secondari (US 5,735,979).*

Claim 27 and 28 depend from claim 1. Because the Examiner's proposed combination fails to render claim 1 obvious, and because Secondari fails to cure the deficiencies noted with respect to claim 1, claims 27 and 28 are patentable at least by virtue of their dependency from claim 1.

**Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.



The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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